

Claims

- [c1] 1. A vehicle suspension system subassembly for supporting a vehicle on an axle, comprising:
- a right radius arm having a first end secured to a frame of the vehicle and a second end forming a bracket, a first bushing and a second bushing secured to the second end of the bracket in vertically spaced relationship to each other and wherein both of the first and second bushings are disposed on a first side of the axle on a longitudinal side of the axle;
 - a left radius arm having a first end secured to the frame of the vehicle and a second end forming a bracket, a first bushing and a second bushing secured to the second end of the bracket in vertically spaced relationship to each other and wherein both of the first and second bushings are disposed on a first side of the axle on a longitudinal side of the axle;
 - a right axle connection structure connected to a right side of the axle and secured to the first and second bushings of the right radius arm;
 - a left axle connection structure connected to a left side of the axle and secured to the first and second bushings of the left radius arm; and

a track bar extending from the axle to the frame of the vehicle from a location proximate a first end of the axle to a location proximate the a second end of the axle that is opposite the first end and generally transversely relative to the vehicle.

[c2] 2. The subassembly of claim 1 wherein the right and left radius arms each include first and second cup shaped elongated half arms that are assembled together in a clam shell manner to define a hollow elongated arm.

[c3] 3. The subassembly of claim 2 wherein the brackets on the second ends of the right and left radius arms include one flange on the first half arm and one flange on the second half arm.

[c4] 4. The subassembly of claim 1 wherein the track bar is disposed on a second side of the axle on the opposite longitudinal side from the first side thereof.

[c5] 5. The subassembly of claim 1 wherein the track bar is connected on a first end to the frame through a first bushing and is connected on a second end to the axle through a second bushing.

[c6] 6. A radius arm for a front axle suspension of a vehicle having an axle that is connected by the radius arm to a frame element of the vehicle at a location that is spaced

in a rearward direction relative to the axle, the axle having a connector extending rearwardly from the axle and having a receptacle in which a pair of bushings are retained in a vertically aligned relationship behind the axle, the bushings each having a central bore through which a fastener is inserted, the radius arm comprising:
an elongated arm having a forward end and a rearward end;
a bracket provided at the forward end of the arm defining a clevis in which the pair of bushings are assembled and having upper and lower vertically aligned fastener receptacle bores through which the fasteners extend to secure the bushings within the bracket; and
a frame bushing provided at the rearward end of the arm that is adapted to connect the rearward end of the arm to the frame of the vehicle.

[c7] 7. The radius arm of claim 6 wherein the elongated arm is formed as a two part clam shell structure formed on sheet metal fabricated half shells that are welded together to form a hollow space within the arm.

[c8] 8. The radius arm of claim 7 wherein the half shells are welded together about their outer edges to seal the hollow space within the arm.

[c9] 9. The radius arm of claim 6 wherein the bracket defines

a clevis.

[c10] 10. The radius arm of claim 6 wherein the elongated arm is formed as a two part clam shell structure formed on sheet metal fabricated half shells and the bracket is integrally formed as a clevis with a first flange of the clevis being provided by one of the half shells and a second flange of the clevis being formed by the other of the half shells.

[c11] 11. In combination, a longitudinally extending radius arm and an axle having a central axis, the combination comprising:
an axle tube;
a connection structure secured to the axle tube;
an elongated body;
a frame connector at a first end of the body;
a bracket at a second end of the body;
a pair of bushings secured to the connection structure and to the bracket, the bushings being disposed on the same fore-and-aft side of the central axis of the axle and being vertically spaced relative to each other.

[c12] 12. The combination of claim 11 wherein the body and bracket are disposed on one side of the axle and do not extend longitudinally beyond the central axis of the axle.

- [c13] 13. The combination of claim 12 wherein the bushings are connected to the brackets by fasteners that are oriented parallel to the central axis of the axle and are vertically aligned with one of the bushings being disposed at a greater height than the central axis and the other bushing being disposed at a lower height than the central axis.
- [c14] 14. The combination of claim 11 wherein the bushings each have a central bore through which a fastener is inserted to secure the bracket to the frame connector, the central bores being parallel to the central axis of the axle and forming a triangular supporting array on one side of the axle, wherein no part of the triangular supporting array extends directly below or directly above the central axis.
- [c15] 15. The combination of claim 11 wherein the frame connector includes a bushing that has a central bore for receiving a fastener that is adapted to connect the first end of the body to the frame of the vehicle.
- [c16] 16. The combination of claim 11 wherein the bushings are connected to the brackets by fasteners that are oriented parallel to the central axis of the axle and the frame connector includes a bushing that has a central bore for receiving a fastener that is adapted to connect

the first end of the body to the frame of the vehicle, wherein the central axis of the axle, the axis of the fasteners that connect the bushings to the brackets and the arms of the central bore of the bushing that connects the first end of the body to the frame are arranged in a quadrilateral array on one side of the axle.